

Landowner \_\_\_\_\_



## WHAT IS A VEGETATIVE BARRIER?

Vegetative barriers consist of permanent strips of stiff, dense vegetation established along the general contour of slopes or across concentrated flow areas.

## PURPOSES

This practice is applied as part of a conservation management system to:

- Reduce sheet and rill erosion
- Reduce ephemeral gully erosion
- Manage water flow
- Stabilize steep slopes
- Trap sediment

## HOW IT HELPS THE LAND

A vegetative barrier is a low cost conservation practice that is very effective at reducing damages caused by water erosion, and may offer an alternative to terraces. In addition, the following benefits are provided:

- Facilitate benching of sloping topography

- Retard and reduce surface runoff by promoting detention and infiltration
- Disperse concentrated flow and reduce ephemeral gully development
- Divert runoff to a stable outlet
- Entrap sediment-borne and soluble contaminants and facilitate their transformations

## WHERE THE PRACTICE APPLIES

This practice applies to all land uses where sheet and rill and/or concentrated flow erosion are occurring. For this practice to be fully effective, it is important to use it with other conservation practices such as, crop rotation, nutrient and pest management, and crop residue management.

## WHERE TO GET HELP

For assistance in developing vegetative barriers, contact your local Natural Resources Conservation Service or Conservation District Office.

## APPLYING THE PRACTICE

### ***Selecting Vegetation for the Barrier***

Grass species should be selected that have a dense, stiff, and upright growth habit and can also withstand sediment buildup. Species such as sand bluestem, big bluestem, Indiangrass, switchgrass, tall wheatgrass, western wheatgrass, and native mixtures of predominantly tall grass species provide the characteristics mentioned above.

### ***Establishing Vegetation in the Barriers***

Barriers may be established vegetatively or from seed. Using vegetative propagation provides quicker stand development but is more expensive. Using seed is cheaper but is subject to washouts and burial of the seed before establishment. Vegetative plantings are strongly recommended in areas where water flow is concentrated.

Broadcast or drilled seed needs to be sown in a strip at least 3 feet wide. Vegetative plantings should be planted in at least one continuous row. These plantings may be from sod chunks, plugs, rhizomes, transplants, or plant divisions planted no more than 6 inches apart down the row. All plantings need to insure good seed or root to soil contact.

### ***Barrier Width***

Barriers should be the larger of 3 feet wide or 0.75 times the design vertical interval.

### ***Spacing of the Barriers***

Vegetative barriers are spaced on the slope according to the purpose they are designed to serve. For most applications they can be spaced based on vertical intervals. The vertical interval will vary depending on the purpose of the barrier. In no case will the spacing exceed 6 feet in vertical interval. In other applications, they may be spaced according to soil loss prediction models.

## MAINTAINING THE PRACTICE

Establishment failures need to be replanted or reseeded by the end of the next planting season.

Mowing may be used to encourage the development of a dense stand and prevent shading of crops. Mowing should be no closer than 15". Mowing in concentrated flow areas is discouraged because it will reduce the size of the stems on the plants.

Crop tillage and other operations should be performed parallel with the barrier.



Vegetative barriers used to reduce sheet and rill erosion.



Vegetative barriers used to reduce ephemeral gully erosion.



Vegetative Barriers used to trap sediment at the end of irrigation furrows.

---

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250 or call 1-800-245-6340 (voice) or (202)720-1127 (TDD). USDA is an equal employment opportunity employer.

## Vegetative Barrier – Job Sheet

Landowner \_\_\_\_\_ Field Number \_\_\_\_\_

Purpose (check all that apply)	
<input type="checkbox"/> Reduce sheet and rill erosion	<input type="checkbox"/> Stabilize steep slopes
<input type="checkbox"/> Reduce ephemeral gully erosion	<input type="checkbox"/> Trap sediment
<input type="checkbox"/> Manage water flow	

Layout, Soil Amendments, Fertilization	Barrier 1	Barrier 2	Barrier 3	Barrier 4
Barrier width (feet)				
Rows per barrier				
Barrier length (feet)				
Barriers area (total acres)				
Field slope (%)				
Lime (tons/acre)				
N (lbs/acre)				
P <sub>2</sub> O <sub>5</sub> (lbs/acre)				
K <sub>2</sub> O (lbs/acre)				

Plant Materials (species/cultivars)	Seeding Rate (pure live seed – lbs/acre)	Seeding Date
Barrier 1:		
1		
2		
3		
Barrier 2:		
1		
2		
3		
Barrier 3:		
1		
2		
3		
Barrier 4:		
1		
2		
3		

### Site Preparation

*Prepare a firm seedbed. Apply lime and fertilizer as indicated by soil testing. Additional requirements:*

### Planting Method

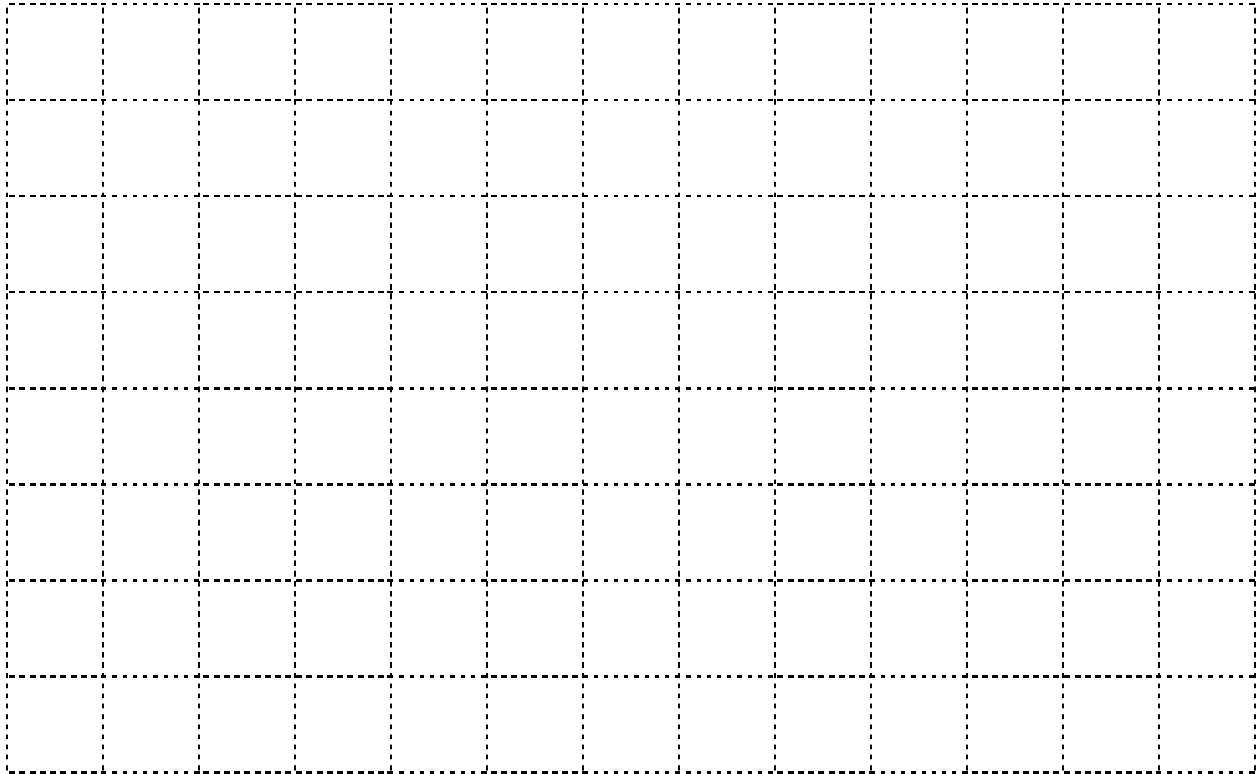
*Drill seed \_\_\_\_\_ inches deep uniformly in the row. Establish vegetation according to the specified seeding rate. If necessary, mulch newly seeded area with \_\_\_\_\_ tons per acre of mulch material. A small grain crop may be needed as a companion crop at the rate of \_\_\_\_\_ pounds per acre (clip or harvest before it heads out). Additional requirements:*

### Operation and Maintenance

## Vegetative Barrier – Job Sheet

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Scale 1"=\_\_\_\_\_ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



Additional Specifications and Notes: